

Review of Information Technology Capital Planing Process
Report No. 98-20, September 4, 1998

Background

The Board Members of the RRB approved the establishment of an Automated Data Processing Steering Committee (ADPSC). The ADPSC is chaired by the Chief Information Officer (CIO) and includes the following senior agency managers:

- Director of Operations
- Chief Financial Officer
- Director of Assessment and Training
- Director of Policy and Systems
- Field Service Regional Director - Region 2 (for Acting Director of Field Service)
- Director of Supply and Service, and
- General Attorney (Office of General Counsel).

The ADPSC is responsible for reviewing and recommending the Strategic Information Resources Management (IRM) Plan that supports the agency's Strategic Plan. The Board Members approved the current Strategic IRM Plan on December 17, 1997. The ADPSC monitors progress toward the implementation of the Strategic IRM Plan and reviews IRM policies for the agency. It is also responsible for reviewing all service requests and capital expenditures over established thresholds related to computer hardware and software. This would include the mainframe and personal computers (PCs), including local area networks/servers (LAN).

Most of the RRB's critical systems are based on mainframe systems and databases. However, new applications are being developed using PC and LAN technology. In addition, RRB employees use PCs for word processing and spreadsheet functions. Most PCs are linked together through LANs to allow employees within an organization to exchange information. The LANs are further connected to the mainframe, which allows for communication between the PC applications and the mainframe applications.

Included in the RRB's Strategic IRM Plan is the agency's Information Technology (IT) Capital Plan, Fiscal Years 1997 through 2002. This plan contains 14 major elements of hardware and software investments the RRB will make during this period. These elements represent approximately \$17.5 million in projected spending subject to future funding availability. The most significant projects and the estimated costs include:

Integrated Workstation Architecture	\$9.0 million
Customer Service Call Center	1.5 million
Image Processing	1.5 million
Mainframe Processor and Operating System	<u>1.3 million</u>
Total	\$13.3 million

The RRB has recently submitted a revised IT Capital Plan for FY 1998-2003. The Board Members have not approved the plan. In this plan, Integrated Workstation Architecture was revised down to \$5.6 million and the Mainframe Processor and Operating System was revised down to \$639,000.

Scope and Methodology

The audit objective for this review was to determine the adequacy of the IT capital planning process. The review of the IT capital planning process encompassed the FY 1997-2002 IT Capital Plan and the Strategic IRM Plan approved by the Board in December 1997.

To accomplish the audit objective the OIG:

- reviewed applicable laws, regulations and procedures;
- interviewed some members of the ADPSC;
- reviewed minutes of the ADPSC meetings;
- assessed the linkage of the planned projects to projected resources;
- determined the relationship of the IT Capital Plan to the Strategic IRM Plan and the RRB's Strategic Plan;
- reviewed details of the Image Processing element of the IT Capital Plan;
- evaluated planned IT projects for possible OIG reviews; and
- determined the extent to which expenditures related to computer hardware and software could be put to better use.

The OIG conducted the audit in accordance with generally accepted government auditing standards. Auditors performed the fieldwork at the RRB headquarters office in Chicago, Illinois from March 1998 through July 1998.

Results of Review

The IT capital planning process of the RRB is generally adequate because it is consistent with the agency's Strategic IRM Plan and its Strategic Plan. In addition, the diversity of the ADPSC membership provides for representation of the functional and organizational entities within the RRB.

The OIG noted that additional improvements could be made to enhance the overall effectiveness of the capital planning process within the RRB.

--The Bureau of Information Services (BIS) should have complete responsibility for the management and support of all PCs/LANs.

--The CIO should have the same reporting relationship as the Director of Administration, Director of Programs and the General Counsel.

--The Strategic IRM Plan should reflect the human resources requirements needed to implement its objectives.

--The ADPSC should develop and approve all budget requests related to the acquisition or funding of IT investments.

--The ADPSC should review and clarify the cost-benefit analysis requirements stated in Administrative Circular IRM-12 to ensure that the committee complies with these requirements.

--The ADPSC should receive and review a cost-benefit analysis from the Office of Programs before making a decision on expansion of the document imaging system.

Detailed description of the areas that can be improved and our recommendations are discussed in the remainder of the report.

Responsibility for PC/LAN Support

As PC use grows in response to particular needs within individual offices, the RRB lacks centralized service and support related to the development and management of its PCs and local area networks/servers.

Although the BIS supports mainframe computing and management for the entire agency, the BIS only supports PC/LAN management for the RRB's Office of Administration, Office of General Counsel and the Board Member offices. The Office of Programs has the primary responsibility for PC/LAN management within its operations.

The lack of centralized PC/LAN management increases the risk that resources for support and service are not efficiently and effectively deployed. Centralizing all PC/LAN support and administration in the BIS would ensure uniform support and expertise throughout the agency.

The July 1998 draft of the Strategic IRM Plan calls for a review of the overall environment and a determination of the need for structural and organizational changes. Also, proposed changes to Administrative Circular IRM-10 include centralization of LAN administration under the jurisdiction of the CIO. In addition, BIS's User Computer Services is responsible for installation, maintenance, repair and disposal of PC/LAN hardware and software. PC application development is still decentralized. However, it is subject to agency standards and larger projects need ADPSC approval. The proposed Circular is currently awaiting approval by the Board Members.

The CIO currently reports to the Director of Administration. If all PC support was centralized in BIS, a CIO reporting directly to the Board Members would ensure that BIS had the organizational independence to support all agency offices.

The OIG's Reinvention Proposals I and II, issued in January 1995 and September 1995 respectively, also recommended that the CIO report directly to the Board Members. The OIG still believes that BIS should be an independent organization with the CIO having the same reporting relationship as the Director of Programs, the Director of Administration and the General Counsel. In Reinvention Proposal IV, issued in September 1996, the OIG recommended that the Board Members appoint a Chief Executive Officer with responsibility for the administration and operations of the RRB. Under this type of structure the CIO would report to the Chief Executive Officer.

Recommendations:

The OIG recommends that the Board Members:

--Approve and implement the centralization features of the proposed Administrative Circular IRM-10. This includes the transfer of resources, personnel and equipment to the Bureau of Information Services (Recommendation No.1).

--Revise the organization structure of the RRB to have the CIO report directly to the Board Members under the existing structure (Recommendation No.2).

Management's Response

The Director of Administration has forwarded the report to the Board Members for their review. The Director would support any decision made by the Board Members for Recommendation Nos. 1 and 2.

Human Resources Planning

The Strategic IRM Plan does not address the staffing requirements necessary to develop the expertise to support the expanded use of personal computers. The IT Capital Plan and the Strategic IRM Plan emphasize the capital needed for technological changes but do not adequately consider the impact of these changes on the RRB's human resources.

The planning process should make provision for the installation of new equipment and the costs associated with staff development and training end users to effectively utilize new technology. Any strategic plan and the supporting documentation should specify how the RRB would implement the objectives of the program.

Historically, the RRB has developed its expertise toward mainframe applications and support. The anticipated growth in the number of PCs and the increased likelihood of more PC applications suggests that the RRB may need to develop more expertise for a PC-based environment.

Several automation initiatives submitted to the ADPSC have suggested the use of contractors to perform a particular task or assist in a particular phase of the project. The

manner in which these initiatives were submitted suggests a lack of planning. Recent examples of the work awarded to outside contractors or for which the ADPSC considered using outside contractors include:

- Maintenance proposals for PCs in field offices and the local area network;
- Installation of a specialized server;
- Testing of a retirement annuity estimating program; and,
- Documenting the LAN configuration in the Office of Programs.

Recommendation:

The OIG recommends that the CIO specifically address human resources requirements in future revisions to the Strategic IRM Plan. The plan revisions should also specify the cost of providing any additional professional development for RRB staff and training for end users and the extent to which outside contractors may be utilized to perform specific tasks (Recommendation No. 3).

Management's Response

Management partly concurs with this recommendation. The ADPSC will add an overview of the human resources requirements to the Strategic IRM Plan in the next revision, scheduled for March 1999. The overview will include a discussion of the types of skills that would be needed to carry out the plan, and would identify any plans for major expenditures in terms of contractor assistance or training efforts as related to specific items in the IT Capital Plan. However, the ADPSC also advised that specific information is already included in the RRB's annual budget submission because the budget is based on more detailed, individualized information than the Strategic IRM Plan.

OIG Comments

Management's proposed corrective action is acceptable to the OIG.

Budget Requests

The fiscal year 1999 budget request for the RRB included a transition fund request for an additional \$4 million including \$1.34 million for technology investments. The Board Members requested that the Director of Policy and Systems in the Office of Programs and the CIO prepare a transition document. The document specified the types of automation initiatives that would enable the RRB to operate at reduced funding levels. The document covered a five year period with total expenditures of \$16 million to \$20 million. The budget request included only the first year portion of the transition fund.

The ADPSC did not develop or approve the request to fund the information technology investments. The Board Members directed two members of the ADPSC to prepare the request for additional funding rather than having the entire committee prepare the request.

The potential exists that, by having only two members of the ADPSC develop the funding request, this document may not be reflective of the strategic IRM plan and the RRB's Strategic Plan. There is also the potential that the ADPSC may feel that its efforts are being undermined or that individual projects may receive special consideration.

The ADPSC charter is included in Administrative Circular REF(RRB)-2. The stated purpose of the committee is to annually review and recommend the Strategic IRM Plan, review service requests, and periodically evaluate the progress in implementing the strategic IRM plan. The charter does not mention procurement or requests to fund information technology. However, the RRB's procurement policy requires the ADPSC to approve all hardware and software procurements.

Recommendation:

The OIG recommends that the CIO propose changes to Administrative Circular REF(RRB)-2 to include the procurement or requests to fund information technology in the purpose of the Automated Data Processing Steering Committee (Recommendation No. 4).

Management's Response

The CIO agrees with the recommendation and will propose the following revision to the ADPSC's purpose in Administrative Circular REF(RRB)-2:

"Review and approve requests for procuring or funding information technology investments."

Review of the Image Processing Project

One of the major elements of the IT Capital Plan is the proposal for a new document imaging system. This initiative consists of replacing an existing imaging system of PCs/workstations, scanners, printers and software. The RRB now uses document imaging to process sickness applications under the Railroad Unemployment Insurance Act and to retain copies of tax statements. The current system must be replaced because no vendors support the RRB's imaging software.

The Office of Programs has proposed purchasing additional workstations to expand document imaging to other areas in the Railroad Unemployment Insurance Act program and to the Railroad Retirement Act programs. The Office of Programs is also proposing to expand imaging to a total of 500 workstations from the approximately 30 now in use.

Benefits of imaging include the reduction in paper handling of claim files and efficiencies in workflow processing. The Office of Programs also advised the ADPSC that the Social Security Administration is initiating an image document system and that the RRB should be compatible with that new system.

In June 1998, the ADPSC approved the replacement of the current document imaging system for the sickness applications/tax statements. Our review determined that the ADPSC did not have a clear specification for computer monitor size needed for the imaging workstations. The OIG suggested that the RRB follow the lead of the Social Security Administration on the monitor size. This suggestion resulted in saving about \$400 for each imaging workstation or \$12,800 for the 32 workstations. If imaging were expanded to the requested 500 workstations, the savings could be as much as \$200,000.

Our review also determined that the ADPSC approved the replacement of the current imaging system without receiving and reviewing the required cost-benefit analysis from the Office of Programs. Administrative Circular IRM-12 states that projects with resource requirements that exceed 1% of the RRB's fiscal year information technology obligations will be subject to cost-benefit analysis. Total estimated cost of \$425,000 for the replacement represents about two percent of the RRB's fiscal year 1998 information technology expenditures.

The CIO advised that the ADPSC approved the purchase without a cost-benefit analysis because the RRB was replacing an existing system that could no longer be supported. The CIO believes that RRB generally would not perform a cost-benefit analysis when replacing existing systems.

However, from our review, the Circular IRM-12 does not make an exception for the replacement of existing systems. The Circular specifically includes maintenance projects. The OIG believes that replacement is a form of maintenance.

Without a cost-benefit analysis, there is a risk that the RRB will spend money on initiatives and projects that do not sufficiently contribute to the agency meeting its goals and objectives. There is also a risk that the RRB may fail to consider better alternatives.

Recommendations:

The OIG recommends that the ADPSC:

--Review and clarify the cost-benefit analysis requirements stated in Administrative Circular IRM-12 to ensure that the committee complies with these requirements (Recommendation No.5).

--Receive and review a cost-benefit analysis from the Office of Programs before making a decision on expansion of the document imaging system (Recommendation No. 6).

Management's Response

Management concurs with Recommendation No. 5. The ADPSC will discuss IRM-12 at its October 1998 meeting.

Management believes Recommendation No. 6 is unnecessary and should be dropped because the ADPSC already expects to receive a cost-benefit-analysis.

OIG Comments

The OIG prepared Recommendation No. 6 because the Office of Programs had planned to complete the cost-benefit-analysis in July but completion was delayed. The OIG believes it is important that the analysis is prepared and reviewed by the ADPSC before funds are committed to the expansion of document imaging.

Laws and Regulations

The RRB is generally in compliance with laws, regulations and guidance applicable to IT capital planning. However, the RRB has not fully complied with the Office of Management and Budget's (OMB) guidance on minimum size for data centers, and OMB has not granted the RRB a requested exception.

The OMB Bulletin No. 96-02, Consolidation of Data Centers, requires Federal agencies to outsource information processing requirements to other agencies or commercial data centers if the aggregate installed processing base is below 325 million instructions per second. The RRB's current processor has only an 82 million instructions per second capability.

The OMB Bulletin 96-02 will expire in October 1998. Section 5 of the Bulletin allows for exceptions to the guidance on a case by case basis. The RRB has requested an exception from the Bulletin because the Internal Revenue Code restricts the distribution of tax information. The RRB's databases contain Social Security Administration wage information considered as tax data by the Internal Revenue Service.

In a February 27, 1998 letter to the OMB, the RRB stated that it will consider the possibility of using or sharing data center resources with other Federal agencies if this can be accomplished without violating the Internal Revenue Code. The RRB will not consider this matter until it has completed the Year 2000 project, which will allow all critical computer applications to handle four-digit year dates.

The IT Capital plan contains an expenditure to replace the mainframe processor and operating system. In June 1998, the CIO recommended a three year lease with an option to buy a new mainframe with a processor operating at approximately 89 million instructions per second. In July, the ADPSC and the RRB Executive Committee approved the leasing of a new processor. However, the RRB Board Members must approve the proposal before the RRB enters into the lease.

The three year lease period should give the RRB enough time to complete its Year 2000 project and address the legal issues related to sharing data center resources.